

Serial No. 10/625,304
67010-039; H2624-SUN

IN THE CLAIMS

Please cancel claims 3, 4, 5 and 10 without prejudice.

1. (Currently Amended) A rotor for an electric motor, comprising:
a rotor core;
at least one end ring connected to the rotor core; and
at least one support sleeve attached to said at least one end ring via an interference fit,
wherein the support sleeve applies a compressive stress on the end ring,
wherein the support sleeve and the end ring material are made from the same material,
and wherein the support sleeve is alloyed to have a higher mechanical strength than the end ring.

2. (Original) The rotor of claim 1, wherein the support sleeve is made from a support sleeve material having a thermal characteristic that is the same as a thermal characteristic of an end ring material.

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Currently Amended) The rotor of claim 1[[4]], wherein a magnitude of the interference fit is between 0.1% and 0.5% of a nominal diameter of an interface between the end ring and the support sleeve.

7. (Original) The rotor of claim 1, wherein the support sleeve is made from one of the group consisting of aluminum, aluminum alloy, copper, copper alloy, nickel, nickel alloy, titanium, and steel.

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8. (Original) The rotor of claim 1, wherein an assembly stress applied to the end ring is less than a tensile yield strength of the support sleeve and the compressive strength of the end ring.

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9. (Currently Amended) An electric motor, comprising:
an electromagnet that generates a magnetic field;
a rotor that rotates in the magnetic field, the rotor comprising
a rotor core having a first end and a second end,
first and second end rings connected to said first and second ends, respectively, of
the rotor core, and
first and second support sleeves interference-fitted onto said first and second end
rings, respectively, to apply a compressive stress on the first and second end rings,
wherein the support sleeve and the end ring are made from the same material and
have the same thermal characteristic, is made from a support sleeve material having a
thermal characteristic that is the same as a thermal characteristic of an end ring
material wherein the support sleeve has at least the same mechanical strength than the end
ring, and wherein the support sleeve is allowed to have a higher mechanical strength than
the end ring.

10. (Cancelled)

11. (Original) The electric motor of claim 9, wherein a magnitude of the interference
fit is between 0.1% and 0.5% of a nominal diameter of an interface between the end ring and the
support sleeve.

12. (Original) The electric motor of claim 9, wherein the support sleeve is made from
one of the group consisting of aluminum, aluminum alloy, copper, copper alloy, nickel, nickel
alloy, titanium, and steel.

13. (Original) The electric motor of claim 9, wherein an assembly stress applied to
the end ring is less than a tensile yield strength of the support sleeve and the compressive
strength of the end ring.